

28. FORMS OF *DANAUS CHRYSIPPUS* LINN. (LEPIDOPTERA: NYMPHALIDAE) IN THE KUMAON HIMALAYA

The Plain Tiger, *Danaus chrysippus* Linn., is one of the commonest Indian butterflies, found throughout the plains, in degraded areas, semi-arid regions and even urban areas. It is not common in evergreen rainforest, and though it ascends to an elevation of 2,750 m in the Himalaya, it is not as common in the hills as on the plains.

Four forms of this butterfly occur in India. The typical form *chrysippus* Linn. is common everywhere. The form *alcippoides* Moore has most of the hindwing recto white. The form *amplifascia* Talbot has white spots of the pre-apical band on the forewing recto extending inwards to the discocellulars, while the form *dorippus* Klug lacks the white spotted black apex to the forewing recto. The three last forms have been recorded sporadically in India, although *dorippus* is the commonest or dominant form in parts of Africa, where *D. chrysippus* is widespread.

The form *dorippus* was thought to occur west of what is now Pakistan (Marshall & de Niceville 1883, quoted by Donahue 1962), but it has subsequently been recorded from Sri Lanka (Woodhouse and Henry 1942), Bengal (Best 1954), Bihar (Harman 1950), Rajasthan (Donahue 1962), Delhi (Ashton 1972), near Pune in Maharashtra (editorial note following Best 1954) and the submontane tract or Bhabar of Kumaon and Garhwal (Atkinson 1882). The record by Atkinson, who treated *dorippus* as a distinct species, is not entirely reliable. Though he asserted that his list was compiled on the basis of actual captures, an unusually large proportion of "records" have not been seen since and are probably misidentifications.

A female specimen of *dorippus* in good condition was recorded from Jones Estate near Bhimtal in Nainital district, Kumaon Himalaya

at c. 1,500 m on May 9, 1994. It has a forewing length of 36 mm, and is in my collection.

No previous or subsequent individuals of this form have been noted in the area. This is not unusual, since it is known to occur in drier regions (Wynter-Blyth 1957) and has hitherto not been recorded in the hills in India. Its appearance in the hills in a region of rather heavy rainfall (up to 2,000 mm annually) is very unusual.

However, April, May and part of June are generally very hot and dry, with the temperature touching 34 °C in the shade, even at 1,500 m in the Bhimtal valley, and 1994 was no exception, which might account for the presence of *dorippus* here.

The form *alcippoides* was considered "very rare" by Wynter-Blyth (*op. cit.*) as well as Evans (1932). There is a female specimen from Dehra Dun in the collection of the Forest Research Institute, Dehra Dun (Roonwal *et al.* 1963) which appears to be the only known specimen from this area. A specimen of *D. chrysippus* with white streaks along the veins of the hindwing recto, recorded on May 15, 1975 in the same locality, i.e., Bhimtal valley, is in my collection. This specimen is an intermediate between typical *chrysippus* and *alcippoides*. Having recorded this intermediate form, it is not unlikely that true *alcippoides* will turn up in the Bhimtal valley sooner or later.

Larsen (1987) noted that the form with the white hindwings (*alcippoides*) became the predominant form in Malaysia and North Sumatra during the 20th century. It would be interesting to keep a check on *D. chrysippus* populations in India, to see whether the effects of the factors influencing the structure of the populations in southeast Asia extend as far as India, in which case *alcippoides* should begin

to appear more frequently. If this is not so, the three uncommon forms will continue to be as rare on the Subcontinent as they have been in the past.

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29. ON THE DISTRIBUTION OF SATURNID MOTHS *SONTHONNAXIA MAENAS* (DOUBLEDAY) AND *LOEPA KATINKA* (WESTWOOD)

While working on an Environmental Impact Assessment project at Kudremukh National Park (KNP), Mr. S.A. Hussain recorded two Saturnid moths, which were photographed by his colleagues and brought for identification. The moths were identified as *Sonthonnaxia maenas* (Doubleday) (syn. *Actias maenas*) and *Loepa katinka* (Westwood).

According to Arora & Gupta (Memoirs of the Zoological Survey of India, Vol. 16, Part I, 1979), the distribution of the moths *Sonthonnaxia maenas* and *Loepa katinka* is northeast India (Assam, Meghalaya, Arunachal Pradesh), Sikkim and West Bengal. *S. maenas* is reported from South Andamans, while *L. katinka* is also found in Himachal Pradesh, Uttar Pradesh and Tamil Nadu. The present record of

these species from Kudremukh National Park (KNP), Karnataka is an extension in their distribution range, it is interesting to note that both the species are mainly found in the foothills of the Himalaya and areas of heavy rainfall like south Andaman and places in Tamil Nadu. Their occurrence in the KNP shows the geographical link in the faunal distribution.

Loepa katinka is also found in other parts of Karnataka. It has been photographed in Matheran (Maharashtra). (I. Kehimkar pers. comm.)

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